



# science in ACTION

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## NORTH CAROLINA

**Partners:** Cape Fear Public Utility Authority; Town of Pittsboro, NC; Fayetteville, NC Public Works Commission (NERL)

**Challenge:** Mapping PFAS levels across an entire river basin

**Resource:** Methods development and laboratory analyses

*[not ready for ECOS – needs work]*



Because of concerns about long-chain per- and polyfluoroalkyl substances (PFASs) which persist in the environment, their use began being phased out in 2006. In 2007, EPA ORD began a first-ever effort in the U.S. to map PFAS levels in an entire watershed, focusing on North Carolina's Cape Fear River Basin. This mapping effort demonstrated that there were multiple sources of many different PFAS throughout the basin, suggesting that since the basin is a major drinking water resource, it likely could potentially be responsible for human exposures to PFAS throughout the entire region.

EPA ORD's PFAS research in the Cape Fear Basin has continued since the 2007 mapping effort, specifically focusing on continued tracking of PFAS in surface and drinking water samples while discovering the emergence of novel PFAS using high resolution mass spectrometry (HRMS) non-targeted analysis approaches. This work has highlighting the ongoing presence not only of many of the old, legacy PFAS compounds (such as PFOS/PFOA), but also of a suite of new PFAS (such as GenX) that came into production after the legacy PFAS were phased out. Most recently, EPA ORD researchers showed conclusively that these new PFAS were present in the drinking water in Wilmington, North Carolina.

**Commented [JZ1]:** Need to wrap this up. What is NC doing about it or how are our findings going to help the identified Partners?

**Commented [SM2R1]:** I am unsure of how the NC regulators are going to use this information. However other states (such as NY, NH, and NJ) have taken notice and sought technical expertise from NERL (Strynar/Lindstrom) in their own investigations.

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May 22, 2017 Working Draft



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